

CORRECTED VERSION

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
25 August 2005 (25.08.2005)

PCT

(10) International Publication Number
WO 2005/078521 A2

(51) International Patent Classification⁷: **G03F 7/00**

(21) International Application Number:
PCT/EP2005/001494

(22) International Filing Date:
15 February 2005 (15.02.2005)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
BO2004A000076 17 February 2004 (17.02.2004) IT

(71) Applicant (for all designated States except US): **CONSEJO SUPERIOR DE INVESTIGACIONES CIENTIFICAS** [ES/ES]; Serrano, 117, E-28006 Madrid (ES).

(71) Applicants and

(72) Inventors: **CAVALLINI, Massimiliano** [IT/IT]; Via Lucca, 62, I-40038 Vergato (IT). **BISCARINI, Fabio** [IT/IT]; Via Brunelli, 4, I-40134 Bologna (IT).

(72) Inventors; and

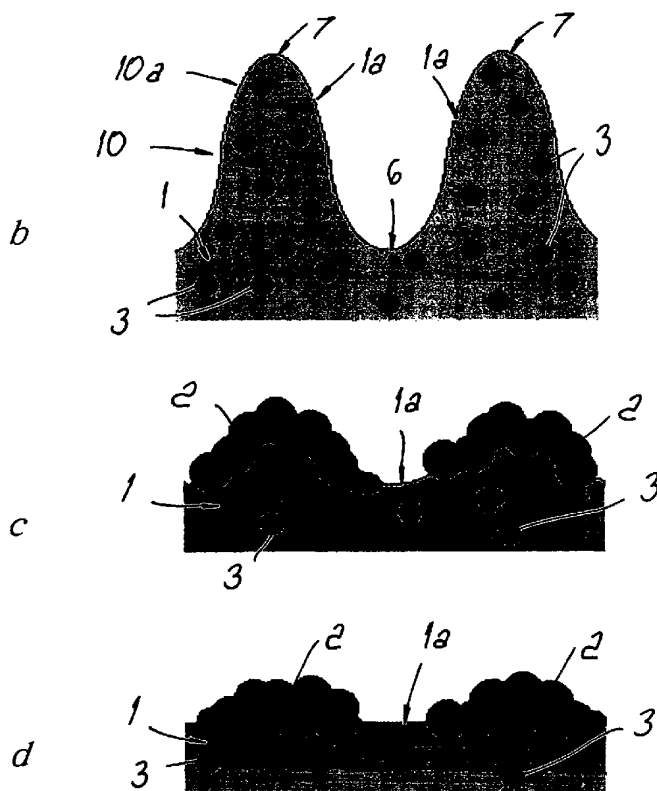
(75) Inventors/Applicants (for US only): **RUIZ MOLINA, Daniel** [ES/ES]; Institut De Ciència De Materials de Barcelona (C.S., I.C.), Campus Universitari de Bellaterra (ICMAB), E-08193 Cerdanyola (ES). **GOMEZ SEGURA, Jordi** [ES/ES]; Institut De Ciència De Materials De Barcelona (C.S., I.C.), Campus Universitari de Bellaterra (CMAB), E-08193 Cerdanyola (ES). **VECIANA MIRO', Jaume** [ES/ES]; Institut De Ciència de Materials De Barcelona (C.S., I.C.), Campus Universitari de Bellaterra (ICMAB), E-08193 Cerdanyola (ES).

(74) Agent: **MODIANO, Guido**; Modiano & Associati, Via Meravigli, 16, I-20123 Milano (IT).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,

[Continued on next page]

(54) Title: METHOD FOR PROVIDING A THIN FILM HAVING A CHEMICAL COMPOSITION THAT IS SPATIALLY STRUCTURED ON A MICROMETRIC OR NANOMETRIC SCALE ON A SUBSTRATE



(57) Abstract: A method for providing a thin film (2) that is spatially structured on a submicrometric or nanometric scale, formed by a material (3), on a substrate (1), so as to obtain a product (9); the method comprises the steps of dispersing the material (3) in the substrate (1) in order to obtain a mixture (10); modeling the mixture (10) to form on a surface (10a) of the mixture (10) protrusions (7) and recesses (6); conditioning the mixture (10) by smoothing any surface roughness thereof; by doing so, the material (3) emerges on the surface only at the protrusions (7) of the mixture (10).

WO 2005/078521 A2



MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— *without international search report and to be republished upon receipt of that report*

(48) Date of publication of this corrected version:

16 March 2006

(15) Information about Correction:

see PCT Gazette No. 11/2006 of 16 March 2006, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.